

REMARKS

The Official Action mailed August 6, 2004, has been received and its contents carefully noted. This response is filed within three months of the mailing date of the Official Action and therefore is believed to be timely without extension of time. Accordingly, the Applicants respectfully submit that this response is being timely filed.

The Applicants note with appreciation the consideration of the Information Disclosure Statements filed on November 22, 2000, and October 20, 2003. A further Information Disclosure Statement is submitted herewith and consideration of this Information Disclosure Statement is respectfully requested.

Claims 3, 4, 7, 8, 11, 12, 16, 17, 20, 21, 25, 26, 29, 30, 34, 35, 38, 39, 43, 44, 47, 48, 52, 53, 56, 57, 61, 62, 65, 66, 70, 71, 74, 75, 77-100, 108-114, 116, 118, 120 and 122 are pending in the present application. Dependent claims 11, 12, 16, 17, 20, 21, 25, 26, 29, 30, 34, 35, 38, 39, 43, 44, 47, 48, 52, 53, 56, 57, 61, 62, 65, 66, 70, 71, 74, 75, 85-87 and 94-96 have been withdrawn from consideration by the Examiner. Accordingly, claims 3, 4, 7, 8, 77-84, 88-93, 97-100, 108-114, 116, 118, 120 and 122 are currently elected, of which claims 3, 4, 7, 8, 77-79 and 97-100 are independent. The independent claims have been amended to better recite the features of the present invention. For the reasons set forth in detail below, all claims are believed to be in condition for allowance. Favorable reconsideration is requested.

Paragraph 3 of the Official Action rejects claims 3, 4, 7, 8, 77-79, 97-100, 108-114, 116, 118, 120 and 122 as obvious based on the combination of U.S. Patent No. 6,195,143 to Ogawa, U.S. Patent No. 5,831,710 to Colgan et al. and JP 10-096955 to Seiki et al. The Applicants respectfully submit that a *prima facie* case of obviousness cannot be maintained against the independent claims of the present application, as amended.

As stated in MPEP §§ 2142-2143.01, to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available

to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." In re Kotzab, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

The prior art, either alone or in combination, does not teach or suggest all the features of the independent claims, as amended. Independent claims 3, 4, 7, 8, 77-79 and 97-100 have been amended to recite a plurality of gap holding members formed by etching an insulating film formed on a first substrate. Also, independent claims 7, 8, 78, 79, 99 and 100 have been amended to recite that a pixel electrode is connected with a wiring connected with a thin film transistor or that a plurality of pixel electrodes are connected with wirings connected with a plurality of thin film transistors. Ogawa, Colgan and Seiki, either alone or in combination, do not teach or suggest at least the above-referenced features of the amended independent claims of the present invention.

The Official Action concedes that "Ogawa does not explicitly disclose the gap holding members in the text or does he disclose that the gap holding members are formed by etching an insulating film" (page 3, Paper No. 20040712). The Official Action relies on Colgan to cure the deficiencies in Ogawa (Id.). Also, the Official Action concedes that neither "Ogawa nor Colgan disclose that the gap holding members are selectively formed over contact holes where the plurality of pixel electrodes are

connected with wirings" (Id.). The Official Action relies on Seiki to cure the deficiencies in Ogawa and Colgan. However, Ogawa, Colgan and Seiki, either alone or in combination, do not teach or suggest at least the above-referenced features of the amended independent claims of the present invention.

Amended independent claims 3, 4, 7, 8, 77-79 and 97-100 recite that a plurality of gap holding members are formed by etching an insulating film formed on a first substrate having a pixel portion, where the first substrate includes a pixel electrode or a thin film transistor (TFT). In other words, the independent claims recite that a plurality of gap holding members are formed by etching an insulating film formed on a TFT substrate having a pixel portion. The formation of a plurality of gap holding members on a TFT substrate is more advantageous than that on an opposing substrate in view of the accuracy of alignment. That is, it is difficult to accurately align the plurality of gap holding members on an opposing substrate to contact holes on a TFT substrate. Since, in the present invention, a plurality of gap holding members are formed on a TFT substrate, alignment is much easier in the present invention.

As noted above, the Official Action relies on Seiki to cure the deficiencies in Ogawa and Colgan, i.e. to allegedly teach that gap holding members are selectively formed over contact holes where a plurality of pixel electrodes are connected with wirings. However, Seiki appears to teach a cylindrical spacer 26 for the gap holding member of the present invention, but the spacer 26 is formed on an opposing substrate side 28 (see, e.g. abstract), not on a TFT substrate. Nothing in the prior art teaches or suggests that Seiki should be modified by, for example, removing the spacer 26 from the opposing substrate side 28 and somehow adding the spacer 26 to a TFT substrate side. Therefore, Ogawa, Colgan and Seiki, either alone or in combination, do not teach or suggest that a plurality of gap holding members are formed by etching an insulating film formed on a first substrate having a pixel portion, where the first substrate includes a pixel electrode or a TFT.

Further, independent claims 7, 8, 78, 79, 99 and 100 have been amended to recite that a pixel electrode is connected with a wiring connected with a thin film transistor or that a plurality of pixel electrodes are connected with wirings connected with a plurality of thin film transistors. The claims also recite that a gap holding member is formed over a contact hole that has a contact portion between the pixel electrode and the wiring connected to the thin film transistor (see, e.g. page 26, lines 9-11 of the present specification). On the other hand, as noted above, Seiki appears to teach a cylindrical spacer 26 formed on an opposing substrate side 28, not on a TFT substrate. Therefore, Ogawa, Colgan and Seiki, either alone or in combination, do not teach or suggest that a pixel electrode is connected with a wiring connected with a thin film transistor or that a plurality of pixel electrodes are connected with wirings connected with a plurality of thin film transistors.

Since Ogawa, Colgan and Seiki do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Paragraph 4 of the Official Action rejects claims 80 and 81 as obvious based on the combination of Ogawa, Colgan, Seiki and U.S. Patent No. 5,982,471 to Hirakata et al. Paragraph 5 of the Official Action rejects claims 82-84 and 88-93 based on the combination of Ogawa, Colgan, Seiki and U.S. Patent No. 5,739,882 to Shimizu et al. However, Hirakata and Shimizu do not cure the deficiencies in Ogawa, Colgan and Seiki. The Official Action relies on Hirakata to allegedly teach details of a TFT and an active matrix panel (page 6, Paper No. 20040712) and on Shimizu to allegedly teach details of gap holding members (page 7, Id.). However, Ogawa, Colgan, Seiki and either Hirakata or Shimizu, either alone or in combination, do not teach or suggest that a plurality of gap holding members are formed by etching an insulating film formed on a first substrate having a pixel portion, where the first substrate includes a pixel electrode or a thin film transistor (TFT). In particular, Ogawa, Colgan, Seiki and either Hirakata or

Shimizu do not teach or suggest removing the spacer 26 in Seiki from the opposing substrate side 28 and somehow adding the spacer 26 to a TFT substrate side. Since Ogawa, Colgan, Seiki and either Hirakata or Shimizu do not teach or suggest all the claim limitations, a *prima facie* case of obviousness cannot be maintained. Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 103(a) are in order and respectfully requested.

Should the Examiner believe that anything further would be desirable to place this application in better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



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